

Claims

1. A laminate comprising a transparent type I collagen sheet and a cultured layer of human corneal endothelial cells provided on said sheet.
2. The laminate according to claim 1, wherein the transparency of said transparent type I collagen sheet is maintained under physiological conditions.
3. The laminate according to claim 1 or 2, wherein said transparent type I collagen sheet has an adhesive factor or bioadhesive layer on the opposite side from the cultured layer of human corneal endothelial cells.
4. The laminate according to any of claims 1 to 3, wherein an adhesive factor or bioadhesive layer is provided between said transparent type I collagen sheet and said cultured layer of human corneal endothelial cells.
5. The laminate according to claim 3 or 4, wherein said adhesive factor is human plasma fibronectin.
6. A method for manufacturing a laminate of cultured human corneal endothelial cells layer comprising:
preparing a transparent type I collagen sheet; and
culturing human corneal endothelial cells on said sheet to form a cultured layer of human corneal endothelial cells.
7. The method according to claim 6 wherein the transparency of said transparent type I collagen sheet is maintained under physiological conditions.
8. The method according to claim 6 or 7, wherein said human corneal endothelial cells are cultured on a transparent type I collagen sheet that has been coated with an adhesive factor or a bioadhesive.
9. The method according to claim 8, wherein said adhesive factor is human plasma fibronectin.

10. The method according to any of claims 6 to 9, wherein said human corneal endothelial cells are cultured after providing a culture solution containing human corneal endothelial cells on a transparent type I collagen sheet and applying centrifugal force in the direction of said transparent type I collagen sheet.
11. The method according to any of claims 7 to 11, wherein in the culturing of said human corneal endothelial cells, the concentration of said human corneal endothelial cells in a culture solution is set to within a range of from 1×10^5 to 1×10^7 cells /mL.
12. The method according to any of claims 6 to 11, wherein said corneal endothelial cells are cells that have been passaged.
13. The method according to claim 12, wherein the passage is conducted for 2 to 10 generations.
14. The method according to any of claims 6 to 13, wherein said corneal endothelial cells are cultured under conditions of 37°C and 10 percent CO₂.
15. The method according to any of claims 6 to 14, wherein the culturing is conducted using a cell culturing solution comprising fetal bovine serum, growth factor, and hyaluronic acid in a medium of low glucose concentration.